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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/077,777	02/20/2002	Shigeki Matsuda	111995	3646

25944 7590 11/29/2005

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EXAMINER
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WONG, EDNA

ART UNIT	PAPER NUMBER
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1753

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/077,777

Applicant(s)

MATSUDA ET AL.

Examiner

Edna Wong

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 November 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date November 21, 2005.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

This is in response to the Amendment dated November 9, 2005. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Response to Arguments***

#### **Claim Rejections - 35 USC § 103**

Claims 1-15 have been rejected under 35 U.S.C. 103(a) as being unpatentable over **Matsuda** (US Patent No. 5,645,706).

The rejection of claims 1-15 under 35 U.S.C. 103(a) as being unpatentable over Matsuda is as applied in the Office Actions dated January 15, 2004, August 24, 2004 and May 9, 2005 and incorporated herein. The rejection has been maintained for the following reasons:

Applicants state that in contrast to the recited claim language, Matsuda specifically discloses a treatment bath that is not substantially free of metal ions, other than those which are a component of a film which will form sludge.

Applicant state that Matsuda clearly discloses metal ions other than those which are a component of the film in the treatment bath and form sludge.

Applicants state that the treatment bath of Matsuda contains metal ions other than those which are component of a film. Accordingly, Matsuda fails to disclose a treatment bath that is substantially free of metal ions, other than those which are a component of a film which would form a sludge. Therefore, Matsuda fails to

disclose each and every feature recited in the rejected claims as amended.

In response, Matsuda teaches that the chemical treatment solutions used are aqueous phosphate solutions containing coat-forming metal ions such as iron, manganese, nickel, calcium, zinc, etc. (col. 2, lines 50-53). These metal ions are a component of the film since they are coat-forming metal ions (see Chemical Equation 4, col. 3, line 5, where the coat-forming metal ions are zinc or iron).

Matsuda teaches that the statement that the phosphate chemical treatment bath contains no solid matter other than the unavoidable components is used to mean that the bath is free of any sludge which might cause energy instability, that is, the bath is free of suspended particles which are reactive and could interfere with the reaction (col. 6, lines 38-43).

This teaching would have suggested to one having ordinary skill in the art that the bath is substantially free of metal ions, other than those which are a component of a film which will form sludge.

The sludge that is formed in the method disclosed by Matsuda is unavoidable sludge, not from "other metal ions" but from the ions already present in the phosphate chemical treatment bath as the chemical reactions in the chemical treatment bath shifts (col. 3, lines 7-15; and col. 8, lines 28-46).

Applicants state that Matsuda relates to an electrolytic treatment using a non-

electrolytic treatment bath which contains metal ions other than those which are a component of a film. Therefore, a sludge is inevitably formed as evidenced by the recitation of claim 1 which recites that circulating and filtering of the phosphate chemical treatment solution is provided to remove energy destabilizing sludge.

In response, Matsuda teaches that the statement that the phosphate chemical treatment bath contains no solid matter other than the unavoidable components is used to mean that the bath is free of any sludge which might cause energy instability, that is, the bath is free of suspended particles which are reactive and could interfere with the reaction (col. 6, lines 38-43).

This teaching would have suggested to one having ordinary skill in the art that the bath is substantially free of metal ions, other than those which are a component of a film which will form sludge.

The sludge that is formed in the method disclosed by Matsuda is unavoidable sludge, not from "other metal ions" but from the ions already present in the phosphate chemical treatment bath as the chemical reactions in the chemical treatment bath shifts (col. 3, lines 7-15; and col. 8, lines 28-46).

Matsuda teaches that circulating the treatment bath restores the state of equilibrium of the phosphate ion in the solution, stabilizes the thermodynamic energy state in the solution, and suppresses the deposition of sludge in the solution phase (col. 7, line 64 to col. 8, line 46). Filtering the treatment bath removes the produced sludge (col. 8, lines 60-65).

Matsuda does not want to produce sludge (col. 6, lines 40-41; col. 7, lines 39 and 44-45; col. 8, lines 45-46; and col. 9, lines 21-22).

Matsuda teaches that filtering would have removed energy-destabilizing sludge, if any, therefrom (col. 32, claim 1). A sludge is not inevitably formed as recited in claim 1.

***Response to Amendment***

***Claim Rejections - 35 USC § 112***

Claims 1-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

**Claim 1**

lines 13-14, recites “the treatment bath is substantially free of metal ions, other than those which are a component of a film which will form a sludge”.

Applicants’ specification discloses that the effect is on the film and not a film (page 4, lines 9-13).

lines 17, recites “and is used to monitor treatment of the bath”.

Applicants’ specification does not disclose monitoring treatment of the bath.

II. Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1

line 17, recites "and is used to monitor treatment of the bath". There is no method step of treating the treatment bath in claim 1. Thus, it is unclear how the bath is being treated, in order for this treatment to be monitored.

Claim 8

line 2, "the complex with the phosphoric acid ..." lacks antecedent basis.

Claim 9

line 5, it appears that the "electrolytic treatment" is the same as that recited in claim 9, line 4. However, it is unclear if it is. If it is, then it is suggested that the word -- the -- be inserted after the word "out".

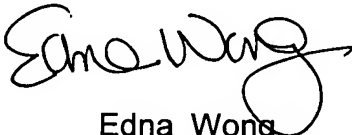
line 8, it appears that "the N<sub>2</sub>O<sub>4</sub> gas formed" is the same as the N<sub>2</sub>O<sub>4</sub> gas generated recited in claim 9, line 2. However, it is unclear if it is. If it is, then it is suggested that the word "formed" be amended to the word -- generated --.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Edna Wong whose telephone number is (571) 272-1349. The examiner can normally be reached on Mon-Fri 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Edna Wong  
Primary Examiner  
Art Unit 1753

EW  
November 22, 2005